

REMARKS

Claims 1, 2 and 9 have been examined. Claims 4-7 are withdrawn as being directed to a non-elected invention. Claims 1 and 9 have been rejected under 35 U.S.C. § 102(b). Also, claims 1, 2 and 9 have been rejected under 35 U.S.C. § 103(a).

I. Rejections under 35 U.S.C. § 102(b) in view of JP 2000-243706 to Kojima (“Kojima”)

The Examiner has rejected claims 1 and 9 under 35 U.S.C. § 102(b) as allegedly being anticipated by Kojima.

A. Claim 1

Applicant submits that claim 1 is patentable over the cited reference. For example, claim 1 recites that the dummy wafer is formed, “of a sintered body of a mixture containing a silicon carbide powder and a non-metallic sintering auxiliary.”

The Examiner acknowledges that Kojima fails to disclose that the dummy wafer is formed of a silicon carbide power and a non-metallic sintering auxiliary (pgs. 3 and 4 of Office Action). Nevertheless, the Examiner maintains that the specific recitation of claim 1 is in product-by-process form. Without conceding to the Examiner’s position, Applicant has amended the recitations of claim 1 in the manner set forth above. Applicant submits that Kojima fails to teach or suggest a dummy wafer formed of a mixture of a silicon carbide powder *and* a non-metallic sintering auxiliary as claimed.

Claim 1 also recites, “wherein the coating film layer has a thickness of 20 μm or more and 40 μm or less and a surface roughness (Ra) of 10 nm or less.”

The Examiner alleges that Kojima discloses the above feature (previously recited in claim 1). In the English Abstract of Kojima, however, the reference discloses that a surface roughness of the film 2 is about 1 to 10 μm . Such range fails to teach or suggest the claimed range of 10 nm or less. In the Examiner's comments on page 3 of the Office Action, it appears that the Examiner examined claim 9 as reciting surface roughness in *microns* as opposed to the recited *nanometers*.

At least based on the foregoing, Applicant submits that claim 1 is patentable over the cited reference.

B. Claim 9

Since the features of claim 9 have been incorporated into claim 1, Applicant has canceled claim 9 without prejudice or disclaimer.

II. Rejections under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,448,418 to Hotate et al. (“Hotate”) and U.S. Patent No. 4,124,667 to Coppola (“Coppola”) or U.S. Patent No. 6,090,733 to Otsuki et al. (“Otsuki”) (assigned to Bridgestone Corporation)

The Examiner has rejected claims 1, 2 and 9 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hotate in view of Coppola or Otsuki.

A. Claim 1

Applicant submits that claim 1 is patentable over the cited references. For example, claim 1 recites, “wherein the coating film layer has a thickness of 20 μm or more and 40 μm or less.”

Hotate is directed to a mirror for synchrotron optical radiation (SOR). The thickness of the SiC film 3 after polishing is 30 to 300 μm and the thickness of the SiC film 4 is 30 to 300 μm (col. 2, lines 47-51). Therefore, a total thickness of the SiC film 3 and the SiC film 4 is at least 60 μm . Thus, Hotate fails to meet the requirements of the claimed invention in that a total thickness of the SiC film 3 and the SiC film 4 is equal to or more than 20 μm or more and 40 μm or less. Moreover, in Hotate, the bottom surface is also covered with the SiC film 2 which is not polished. Due to this, it is considered that a total thickness of the SiC films would at least be thicker than 90 μm (i.e., thicker than the claimed invention).

Applicant submits that in the present invention, the claimed range is provided to prevent warpage of the dummy wafer. In particular, the coating film layer is preferably made thin to a degree such that the base material may not be exposed during the polishing step while maintaining the thickness of the base material to be thick to a certain extent (pg. 24, lines 8-22 of present Application).

At least based on the foregoing, and since Coppola or Otsuki fail to cure the deficient teaching of Hotate, Applicant submits that claim 1 is patentable over the cited references.

Also, although the claims have not been rejected in view of a combination of Kojima and Hotate, Applicant submits the following. In particular, Kojima makes it more difficult for the CVD film to come off by making an average surface roughness to be equal to or more than 1 μm . Due to this, it is not possible to make the surface roughness Rms of the dummy wafer of Kojima to be equal to or less than 3 ~ 20 Å, unlike the mirror for SOR of Hotate. In Hotate, the SiC film of each layer is equal to or more than 30 μm . When the SiC film of each layer is less than 30 μm , a CVD film becomes an island structure and does not form a film. Furthermore, a surface of the lower layer is exposed when polished (see Hotate, col. 2, lines 9-11).

Accordingly, in regard to the mirror for SOR of Hotate, it is not possible to make the SiC film to be, for example, 10 µm. Thus, one of ordinary skill would not consider combining Kojima and Hotate.

B. Claim 2

Applicant submits that claim 2 is patentable over the cited references at least by virtue of its dependency.

C. Claim 9

Since the features of claim 9 have been incorporated into claim 1, Applicant has canceled claim 9 without prejudice or disclaimer.

III. Rejections under 35 U.S.C. § 103(a) in view of Hotate, Coppola or Otsuki and U.S. Patent No. 4,856,887 to Wakugawa (“Wakugawa”)

The Examiner has rejected claims 1, 2 and 9 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hotate in view of Coppola or Otsuki and Wakugawa.

A. Claim 1

For at least the reasons set forth above in the previous rejection of claim 1, and since Wakugawa fails to cure the deficient teachings of Hotate, Coppola and Otsuki, Applicant submits that claim 1 is patentable over the cited references.

B. Claim 2

Applicant submits that claim 2 is patentable over the cited references at least by virtue of its dependency.

C. Claim 9

Since the features of claim 9 have been incorporated into claim 1, Applicant has canceled claim 9 without prejudice or disclaimer.

IV. Rejections under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,853,840 to Saito (“Saito”) in view of Kojima.

The Examiner has rejected claims 1, 2 and 9 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Saito in view of Kojima.

A. Claim 1

Claim 1 also recites, “wherein the coating film layer has a thickness of 20 μm or more and 40 μm or less and a surface roughness (Ra) of 10 nm or less.”

The Examiner alleges that Kojima discloses the above feature (previously recited in claim 1). In the English Abstract of Kojima, however, the reference discloses that a surface roughness of the film 2 is about 1 to 10 μm . Such range fails to teach or suggest the claimed range of 10 nm or less. In the Examiner’s comments on page 3 of the Office Action, it appears that the Examiner examined claim 9 as reciting surface roughness in *microns* as opposed to the recited *nanometers*.

Since Saito fails to cure the above-noted deficient teachings of Kojima, Applicant submits that claim 1 is patentable over the cited references.

B. Claim 2

Applicant submits that claim 2 is patentable at least by virtue of its dependency.

C. Claim 9

Since the features of claim 9 have been incorporated into claim 1, Applicant has canceled claim 9 without prejudice or disclaimer.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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